OPTION 3: COMPLETE BRAIN REMOVAL

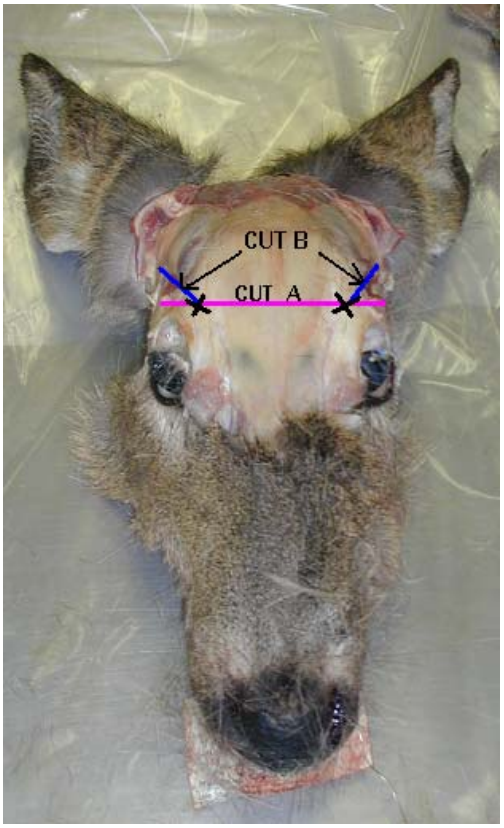
1.

It is highly recommended that protective clothing and equipment be worn in handling tissues during this collection procedure. Use of safety goggles, disposable respirator mask and gloves are a minimum requirement for doing this procedure.

2.

Incise the skin on the midline over the poll and forehead to below the eye sockets. Skin and bone out tissues from the sockets backward to the foramen magnum. Reflect the skin and tissues laterally to assure that no skin, fat, or muscle is in any areas to be sawed.

3.



Using a bone saw, make your first cut (Cut A) transversely at a level just behind each orbital rim (eye socket). This cut should be about 3/4 inch in depth. Also all 3 cuts should be angled inwards at about 45 degrees from the vertical axis. This allows easier removal of the skullcap later.

4.

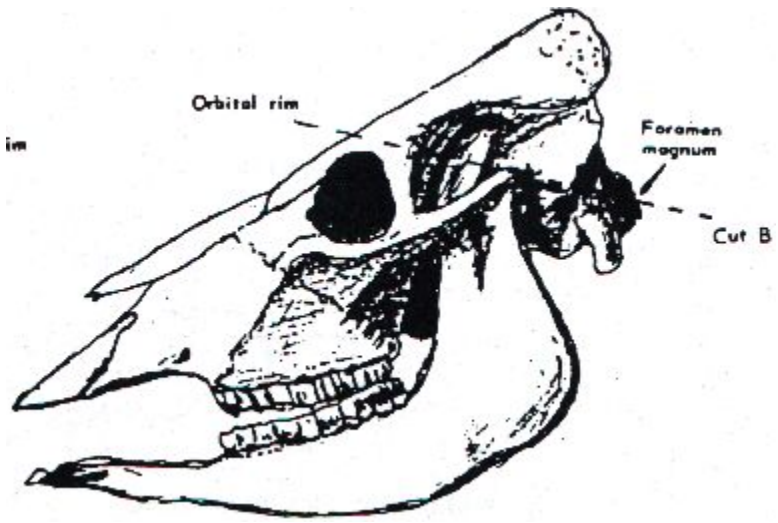
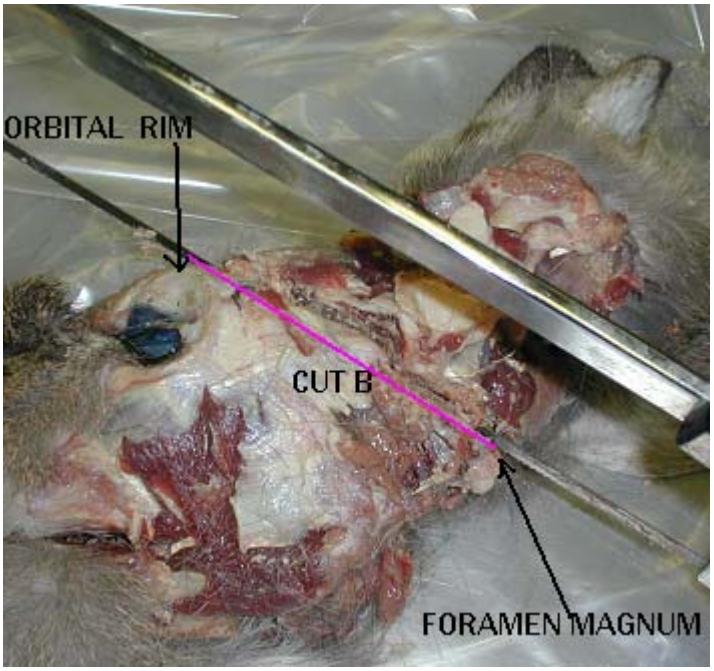


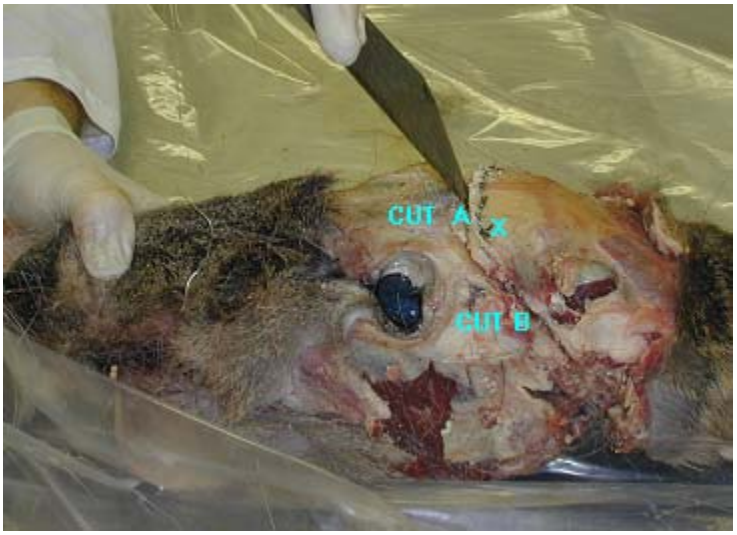
FIGURE 2



After making Cut A then make a cut on each side of the head extending from the opening where the spinal cord exits the base of the skull (foramen magnum) to about 1/2 inch medial to the eye sockets (orbital rim) joining the previous cut (Figure 2, Cut B).

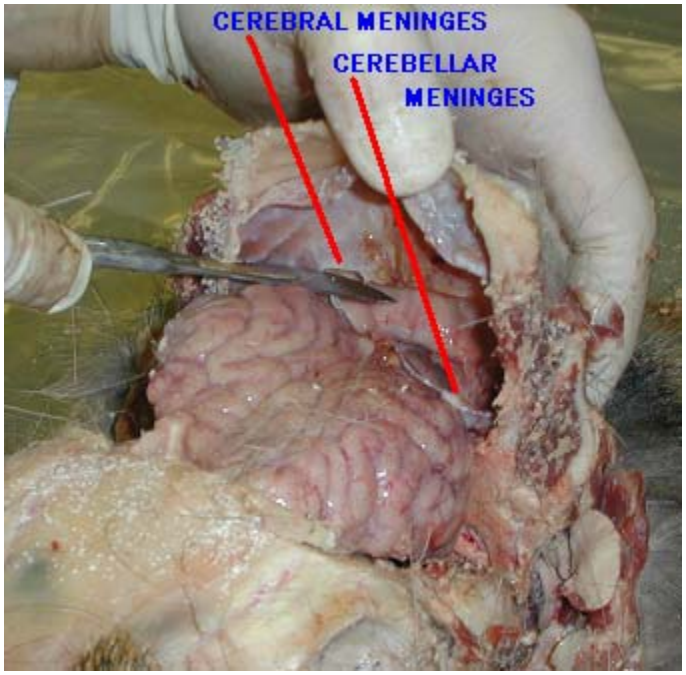
Each Cut B should meet Cut A at the areas marked “X” as noted in step’s 3 & 5.

5.



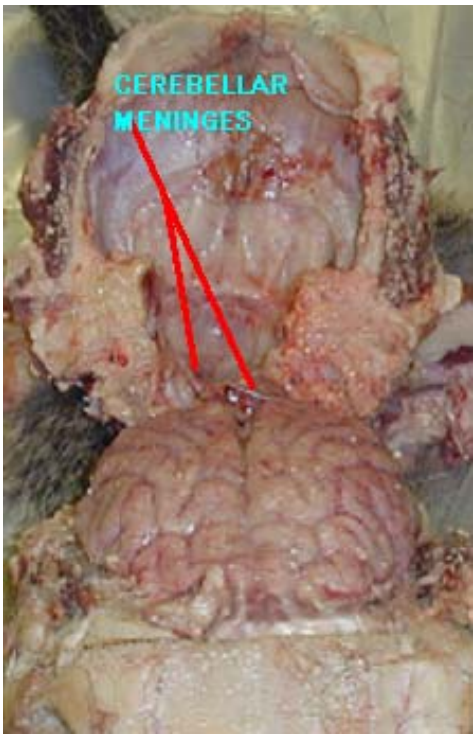
Insert into Cut A either a wood chisel, a wide-tipped large screwdriver or some other tool (cleaver in this case) that can be used to pry the skullcap upward and backward.

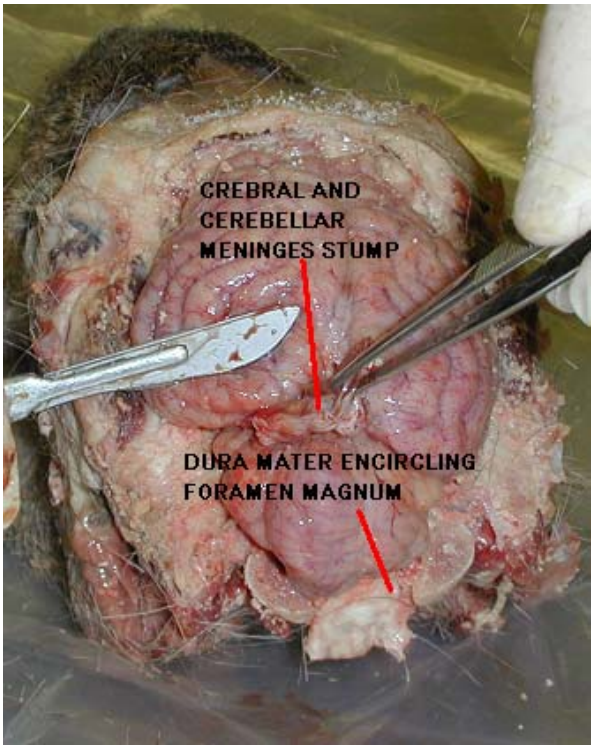
6.



The attached meninges (tough outer white covering of the brain) are cut using scissors or knife (scalpel in this case) as the skullcap is removed.

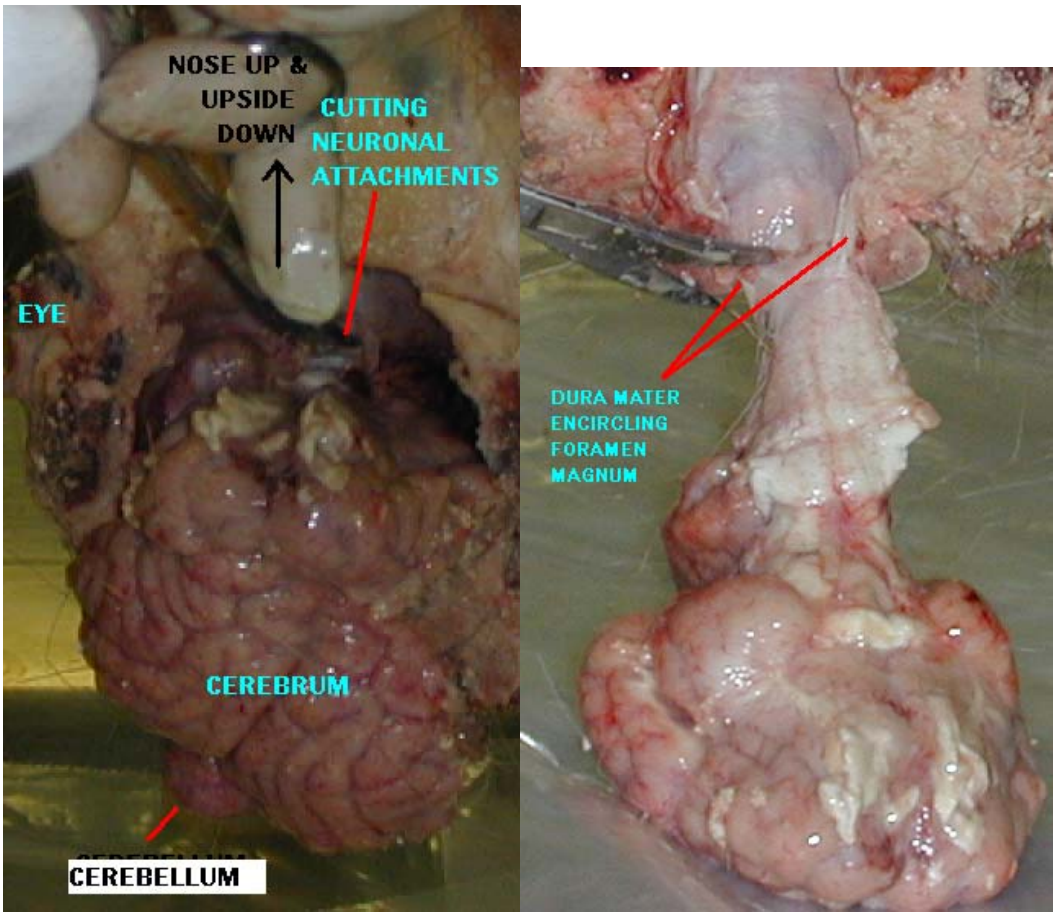
7.





If the meninges between the cerebral hemispheres and over the cerebellum (cauliflower appearing portion at the rear of the brain sitting on top of the mid-brain with spinal cord attached) are still intact after prying the skull off then cut them and pull them off to the sides of the skull. Also, the dura mater, which encircles the spinal cord exiting the foramen magnum usually, needs to be cut.

8.

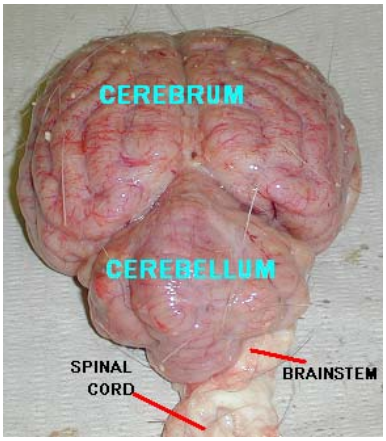


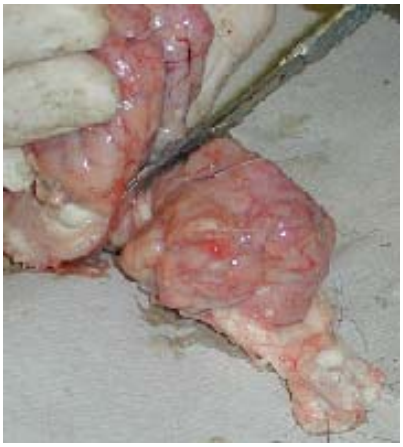
Hold the head with the nose or jaw pointing upward to allow gravity to assist removal of the brain from the cranial cavity. While in this position gently tease the brain out while cutting through the brain attachments (nerves) starting from the front (nose) and working towards the back of the skull. Allow the brain to drop gently onto a clean, dry surface.

Note:
Be sure to disinfect working surfaces and reusable tools before sampling the next head to avoid potential cross contamination.

Recommend use of Styrofoam-like or plastic dishes between brain samplings as a working surface. **Recommended Disinfectant** is 50 **ounces** household bleach (5.25% or 52,500 ppm available chlorine) **ADDED to 1 GALLON of CLEAN WATER. As always, use labeled instructions on bleach container regarding SAFE USE.**

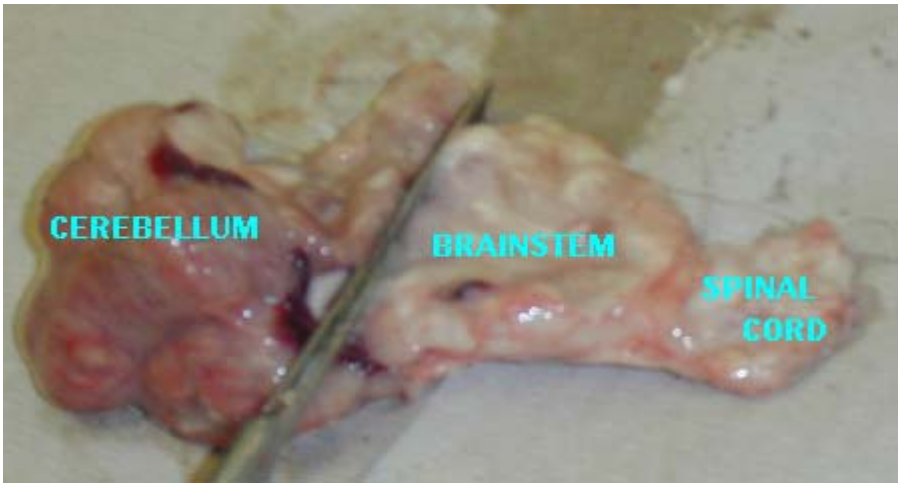
9.





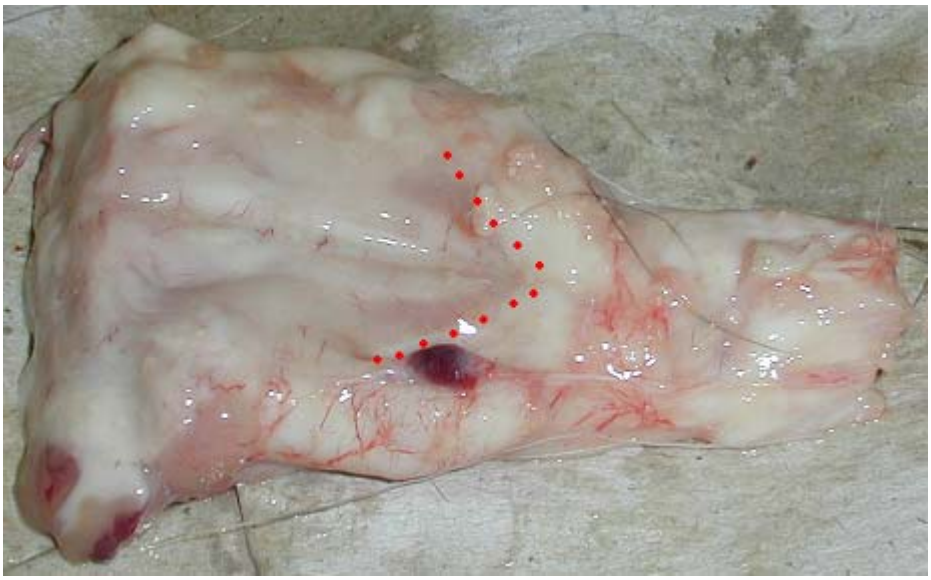

Detach the brainstem, cerebellum, and cervical spinal cord from the rest (front portion) of the brain by making a cut just ahead of the cerebellum and behind the cerebral cortexes. You should end up with the brainstem and cerebellum attached to it.

10.



Sample collection: Cut between the cerebellum and the brainstem separating each from one another.

11.



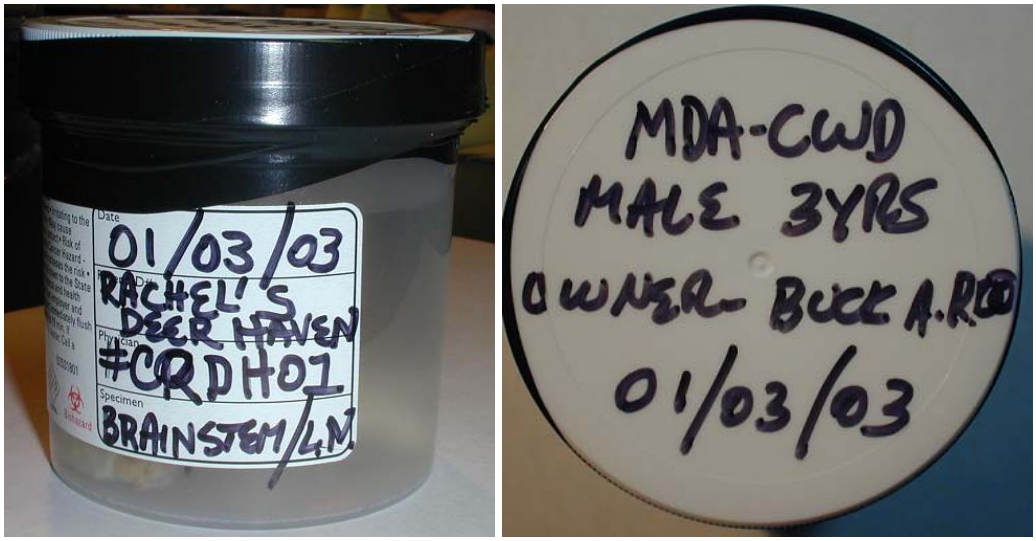
A GOOD REPRESENTATIVE SAMPLE OF THE BRAINSTEM PORTION NEEDED FOR CWD TESTING. It is very important that the juncture where the spinal cord and brain meet forming a "V" (outlined in red dots) be submitted with the remainder of brainstem.

12.

Immerse the entire brainstem in a pre-labeled and identified jar containing 10% NB formalin. **Make sure** the tissues are "**drowning"** in the formalin. Add more 10% NB formalin from an unused jar if you need more formalin. If the jar is not

large enough (elk brains possibly) then use an appropriate larger, watertight when sealed, plastic jar.

13.



. Properly label the bottle as noted in "Identification and Submission Forms" section. It is best to pre-label and write all the information known on the bottles before collection and finish identification prior to adding tissues. Doing this will make it easier to write the information needed on the label and lid before they get wet and soiled while collecting tissues. Overlapping electrical tape in a clockwise direction, works well as a means of sealing jars.